

CLAIMS

1. A method for receiving a program in a dual-encrypted stream by a plurality of set-tops, the plurality of set-tops for decrypting one of a first encryption stream and a second encryption stream, the method comprising the step of:

5 transmitting a program association table including a plurality of programs, wherein each program has two program numbers, wherein a first program number is associated with a first program map table for the first encryption stream and a second program number is associated with a second program map table for the second encryption stream,

10 wherein the plurality of set-tops retrieve packets associated with a desired program via one of the first program map table and the second program map table.

2. The method of claim 1, wherein the first program map table includes a plurality of program identifiers for the first encryption stream, and wherein the second program map table 15 includes the plurality of program identifiers for the first encryption stream and a plurality of program identifiers for the second encryption stream.

3. The method of claim 1, wherein the first program map tables includes a plurality of packet identifiers for one of the first encryption stream and a clear stream, and wherein the second 20 program map tables includes the plurality of packet identifiers for one of the first encryption stream and the clear stream and a plurality of packet identifiers for the second encryption stream.

4. The method of claim 3, wherein a set-top for decrypting the second encryption stream retrieves the packets associated with the desired program via the second program map table, 25 wherein a packet identifier is associated with one of the second encryption stream and the clear stream.

5. A method for receiving a clear transport stream and for providing an encrypted transport stream, the clear stream including a plurality of programs, each program comprising a plurality of 30 packets each having a packet identifier (PID), the method comprising the steps of:

scrambling the clear transport stream according to a first encryption method to provide a first encryption program;

scrambling the clear transport stream according to a second encryption method to provide a second encryption program;

35 passing packets of the clear transport stream to a multiplexer, wherein when at least one critical packet is identified in the packets of the clear transport stream, the critical packet of the

clear stream drops and the scrambled critical packets included in the first and second encryption programs pass to the multiplexer; and

multiplexing the passed packets of the clear transport stream and the critical packets of the first and second encryption programs to provide a partial dual-encrypted stream,

5       wherein a program association table is provided along with the partial dual-encrypted stream indicating a plurality of first program numbers associated with the critical packets of the first encryption stream and a plurality of second program numbers for the passed packets of the clear stream and the critical packets of the second encryption stream.

10      6.       The method of claim 5, wherein each of the plurality of second program numbers indicates a program map table, wherein the program map table includes packet identifiers identifying the critical packets of the first and second encryption programs and the passed packets of the clear transport stream.

15      7.       The method of claim 6, the steps further comprising remapping at least one PID value associated with the second encryption program, whereby the scrambled packets of the first and second encryption programs each have a differing PID value, wherein the different PID values are reflected in the program map table associated with each of the plurality of second program numbers.

20      8.       The method of claim 5, wherein each of the plurality of first program numbers indicates a first program map table, wherein the first program map table includes a plurality of packet identifiers for one of the first encryption program, and wherein each of the plurality of second program numbers indicates a second program map table, wherein the second program map table includes a plurality of packet identifiers for one of the first and second encryption programs and the clear transport stream.

25      9.       A method for receiving a clear transport stream and for transmitting an encrypted transport stream, the clear transport stream including a plurality of programs, each program comprising at least one elementary stream, the at least one elementary stream comprising a plurality of packets each having a packet identifier (PID), the method comprising the steps of:

scrambling with a first scrambler a first clear transport stream according to a first encryption method to provide a first encrypted program;

30      identifying a critical packet associated with a second clear transport stream, wherein prior to identification, the second clear transport stream is allowed to pass and the first encrypted program drops, and wherein subsequent to identification, the identified critical packet associated

with the first encrypted program passes to a multiplexer, and the identified critical packet associated with the second clear transport stream is provided to a second scrambler;

scrambling the critical packet associated with the second clear transport stream according to a second encryption method to provide a second encrypted program, wherein the second encrypted program is provided to the multiplexer; and

5       multiplexing non-critical packets associated with the second clear transport stream and the encrypted critical packets associated with the first and second encrypted programs to provide a partial dual-encrypted stream,

10      wherein a program association table is provided along with the partial dual-encrypted stream indicating a plurality of first program numbers associated with the critical packets associated with the first encrypted program and a plurality of second program numbers associated with the non-critical packets associated with the second clear transport stream and the critical packets associated with the second encrypted program.

15      10.     The method of claim 9, wherein each of the plurality of second program numbers indicates a program map table, wherein the program map table includes packet identifiers identifying the critical packets associated with the second encrypted program.

20      11.     The method of claim 10, the steps further comprising remapping at least one PID value associated with the second encrypted program, whereby the scrambled packets of the first and second encrypted programs each have a differing PID value, wherein the different PID values are reflected in the program map table associated with each of the plurality of second program numbers.

25      12.     The method of claim 10, wherein a set-top for decrypting the second encrypted program retrieves packets determined by the program map table associated with one of the plurality of second program numbers, wherein a packet identifier is associated with one of the critical packets of the second encrypted program and the non-critical packets of the clear transport stream.